DOCUMENT RESUME

ED 301 751 CE 051 538

TITLE	Brick and Stone Masonry Series. Duty Task List.
INSTITUTION	Oklahoma State Dept. of Vocational and Technical Education, Stillwater. Curriculum and Instructional Materials Center.
PUB DATE	88
NOTE	35p.; For other duty/task lists, see CE 051 510-537.
AVAILABLE FROM	Curriculum and Instructional Materials Center, Oklahoma Department of Vocational and Technical Education, 1500 West Seventh Avenue, Stillwater, OK 74074.
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Behavioral Objectives; *Bricklaying; *Construction (Process); *Construction Materials; Employment Qualifications; Estimation (Mathematics); Job Analysis; Job Skills; *Masonry; *Occupational Information; Secondary Education; *Trade and Industrial Education

ABSTRACT

This task list is intended for use in planning and/or evaluating a competency-based course in brick and stone masonry. The tasks required for 15 different duties performed by bricklayers and 13 different duties typically performed by rocklayers are outlined. The following bricklaying duties are covered: estimating materials for and laying out a wall, structure, sidewalk, or paving; constructing a wall and laying paving; constructing chimneys and fireplaces, sills and lintels, walls with control joints, walls of rubble or field stone, walls of precast or prefabricated units, piers and columns, beams, and steps and stairs; installing wall and floor tile; cleaning masonry, pointing and caulking joints, waterproofing, and installing glass block. The duty/task list for rocklaying covers most of the same tasks, only from the standpoint of working with stone rather than brick. The two sets of occupational duty/task lists are the result of an extensive two-step development process in which information on current occupational requirements was gathered from such sources as consortia, trade associations, and current curriculum materials and was then synthesized by industry representatives, vocational instructors, and state-level representatives. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED3017751

DUTY TASK LIST

BRICKLAYER
ROCKLAYER

CE057538

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

2

OKLAHOMA OCCUPATIONAL TESTING CENTER

OKLAHOMA OCCUPATIONAL TESTING CENTER

INTRODUCTION:

Today's vocational instructors and administrators are faced with a myriad of important questions. They are searching for methods of providing accountability for students' acquisition of knowledge and skills as related to a constantly changing job market.

The Oklahoma Occupational Testing Center is in the business of eliminating some of the guesswork in answering today's tough questions. The professional staff, using a thorough and valid methodology, has developed duty/task lists for over 150 occupations in vocational education. Additional occupational duty/task lists will be made available as development is completed. These duty/task lists will help answer the following questions:

- Are students being prepared for today's jobs?
- What should today's vocational instructors be teaching?
- Is the curriculum addressing industry needs and is it up-to-date?
- How can vocational programs be improved?
- What in-service programs are needed for instructors?

BACKGROUND:

The occupational duty/task lists are the result of an extensive development process. Information regarding the occupational skills needed for employment is gathered from a number of sources such as consortia, trade associations, and current curriculum materials. This information is then synthesized by: 1) industry representatives, 2) vocational instructors, and 3) state level vocational representatives. The end result is a listing of occupations and the specific duties and tasks within each occupation. After dissemination for field review a committee of industry and vocational representatives revise the duty/task list to its final form.

USES:

The Oklahoma Occupational Testing Center's Duty/Task Lists are designed to be of value to a vocational program in several ways:

- Improving program planning
- Documenting industrial standards
- Evaluating curriculum and instruction
- Tracking individualized instruction*
- Using as a discussion tool with advisory committees
- Developing up-to-date job descriptions
- Performing self-evaluations
- Performing administrative program evaluations

INFORMATION:

To find out more about the Oklahoma Occupational Testing Center, call toll free:
1-800-654-4502.
Ask for our free catalog, listing over 150 occupations for which duty/task lists are available. CIMC curriculum materials related to these lists may also be available.

*A Progress Chart is provided for tracking individualized instruction.

Copyright 1988

Oklahoma State Department of Vocational and Technical Education
Oklahoma Occupational Testing Center

All rights reserved.

Printed in the United States of America by the
State Department of Vocational and Technical Education
Stillwater, Oklahoma 74074

The Oklahoma State Department of Vocational and
Technical Education does not discriminate on the
basis of race, creed, color, national origin, sex, age,
veteran status, or qualified handicap.

89-006046

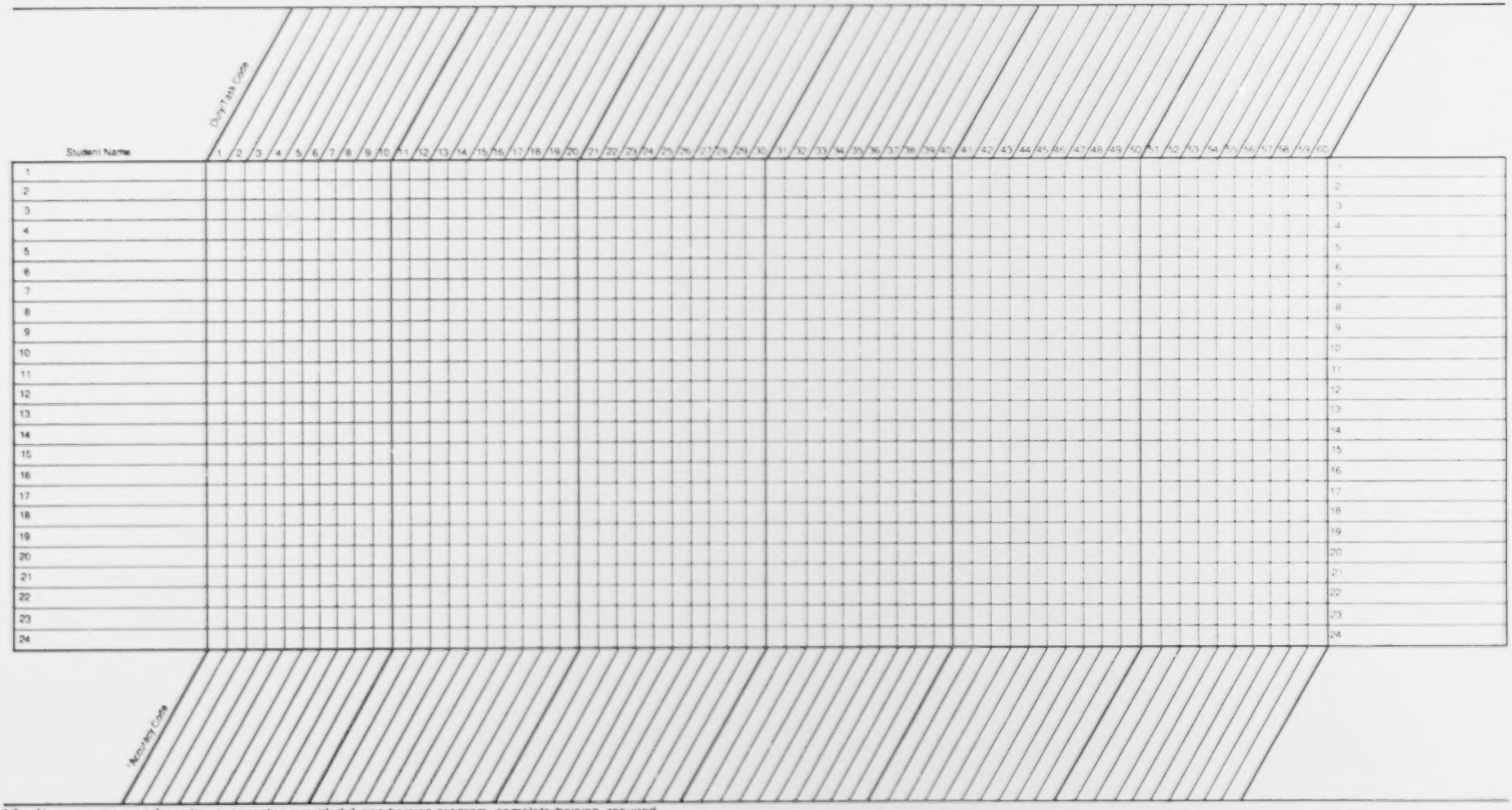
PROGRESS CHART

OKLAHOMA OCCUPATIONAL TESTING CENTER

Program

Oklahoma State Department of Vocational and Technical Education

Date



* 0 = No exposure - no information nor practice provided during training program; complete training required

1 = Exposure only - general information provided with no practice time; close supervision needed and additional training required

2 = Limited practice - has practiced during training program; additional training is required to develop skill

3 = Moderately skilled - has performed independently during training program; limited additional training may be required

4 = Skilled - can perform independently with no supervision

This chart may be duplicated as needed

OC3137

**This chart is intended for teacher file use only. Do not post.

DUTY/TASK LISTS

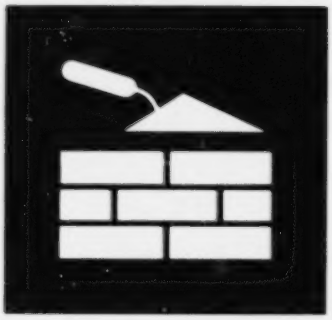
BRICK AND STONE MASONRY SERIES

OCCUPATIONS:

1. BRICKLAYER
2. ROCKLAYER

DUTY/TASK LIST

BRICK AND STONE MASONRY SERIES



OCCUPATION 1: BRICKLAYER

DUTIES:

A. Estimate Materials for a Wall, Structure, Sidewalk, or Paving
B. Layout a Wall, Structure, Sidewalk, or Paving
C. Construct a Wall and Lay Paving
D. Construct Chimneys and Fireplaces
E. Construct Walls with Sills, Lintels, and Coping
F. Construct Walls with Control Joints (Expansion Joints)
G. Construct Walls of Rubble or Field Stone
H. Construct Walls of Pre-Cast and Pre-Fabricated Units
I. Install Wall and Floor Tile
J. Clean Masonry, Point and Caulk Joints
K. Waterproof a Structure and Control Moisture
L. Install Glass Block
M. Construct Piers, Columns, and Beams
N. Construct Steps and Stairs
O. Set Up a Brick-Block or Rock Job

OCCUPATION: **BRICKLAYER**

DUTY: **Estimate Materials for a Wall, Structure, Sidewalk, or Paving**

CODE	TASK	TAUGHT	COMMENTS
A.01	Estimate the materials for a brick job (number of bricks, amount of mortar, amount of dye or coloring, amount of scaffolding, number of man hours, total cost)		
A.02	Estimate the materials for a block job (number of blocks, amount of mortar, amount of scaffolding, reinforced steel, concrete for beams and vertical reinforcement, number of man hours, total cost)		
A.03	Estimate the materials for a stone job (amount of stone, amount of mortar, amount of dye or coloring, amount of scaffolding, number of man hours, total cost)		

OCCUPATION: BRICKLAYER

DUTY: Layout a Wall, Structure, Sidewalk, or Paving

CODE	TASK	TAUGHT	COMMENTS
B.01	Establish grade levels (using builder's level)		
B.02	Mark-off the boundaries of a wall, structure, or a paved area (use a framing square for square corners and a transit for non-square corners)		
B.03	Layout brick bonds (using a steel tape or a dry bonding method)		
B.04	Layout a section of wall containing joint reinforcements and openings as per plan (brick and block)		
B.05	Layout the center for an arch using a template or brace (semi-circular, segmental, elliptical, and/or Gothic)		
B.06	Layout and build leads		

OCCUPATION: **BRICKLAYER**

DUTY: **Construct a Wall and Lay Paving**

CODE	TASK	TAUGHT	COMMENTS
C.01	Measure, mark, and cut masonry units to size (use manual, dry cut, and wet cut methods)		
C.02	Mix mortar to specifications (manually, and/or with a mechanical mixer)		
C.03	Install wall ties on a frame wall		
C.04	Construct a wall section with joint reinforcements and openings (brick and block, various bonds)		
C.05	Set a bearing plate and/or J-bolts (anchor bolts)		
C.06	Lay a section of paving (various bonds)		
C.07	Construct joints		

OCCUPATION: BRICKLAYER

DUTY: Construct Chimneys and Fireplaces

CODE	TASK	TAUGHT	COMMENTS
D.01	Cut flue liner tile		
D.02	Construct a firebox with a straight, curved, or irregular wall (with fire clay or mortar)		
D.03	Install lining and lay up a chimney		
D.04	Construct a fireplace face		
D.05	Install flashing around a chimney or fireplace		

OCCUPATION: **BRICKLAYER**

DUTY: **Construct Walls with Sills, Lintels, and Coping**

CODE	TASK	TAUGHT	COMMENTS
E.01	Construct a block wall with a bond block lintel (bond beam or hair pin)		
E.02	Lay stone coping on top of a brick or block wall		
E.03	Construct a solid brick wall (8" thick) with a sill (brick, precast, built, cast-in-place)		
E.04	Lay brick rowlock coping on top of a brick wall (include sill flashing)		

OCCUPATION: **BRICKLAYER**

DUTY: **Construct Walls with Control Joints (Expansion Joints)**

CODE	TASK	TAUGHT	COMMENTS
F.01	Construct a block wall with a caulking compound or elastomeric seal control joint		
F.02	Construct a block wall with tongue and groove block control joints		
F.03	Construct a block wall with a Z-tie control joint		
F.04	Construct a block wall with a gasket or greased wire control joint		
F.05	Construct a block wall with a rake-and-caulk control joint		

OCCUPATION: BRICKLAYER

DUTY: Construct Walls of Rubble or Field Stone

CODE	TASK	TAUGHT	COMMENTS
G.01	Construct a stone corner (using an uncoursed cobweb pattern)		
G.02	Layout and construct a wall section to a specified height using field stone (rubble) veneer on an existing or frame wall		
G.03	Layout and construct a wall section with projections		
G.04	Layout and construct a wall section two-withes thick		
G.05	Construct a panel of wall bond, random-coursed sandstone		
G.06	Construct a wall section of pre-cast stone		

OCCUPATION: BRICKLAYER

DUTY: Construct Walls of Pre-Cast and Pre-Fabricated Units

CODE	TASK	TAUGHT	COMMENTS
H.01	Set and anchor a pre-cast or pre-fabricated panel on a block wall		
H.02	Construct a pre-cast or pre-fab panel wall with raked joints		
H.03	Construct a stone wall of stone panels with raked joints (stone, slate, marble, or granite panels)		

OCCUPATION: **BRICKLAYER**

DUTY: **Install Wall and Floor Tile**

CODE	TASK	TAUGHT	COMMENTS
I.01	Install floor tile (on a concrete base, wood base)		
I.02	Install wall tile (on a masonry wall, gypsum wall, or concrete backing board)		
I.03	Install tile in a wet area		

OCCUPATION: BRICKLAYER

DUTY: Clean Masonry, Point and Caulk Joints

CODE	TASK	TAUGHT	COMMENTS
J.01	Repair mortar joints		
J.02	Clean brick work with brick cleaners		
J.03	Caulk a door frame and a control joint		

OCCUPATION: **BRICKLAYER**

DUTY: **Waterproof a Structure and Control Moisture**

CODE	TASK	TAUGHT	COMMENTS
K.01	Waterproof a foundation wall by applying cement mortar parging		

OCCUPATION: BRICKLAYER

DUTY: Install Glass Block

CODE	TASK	TAUGHT	COMMENTS
L.01	Install glass 8" block in a wall opening		

OCCUPATION: BRICKLAYER

DUTY: Construct Piers, Columns, and Beams

CODE	TASK	TAUGHT	COMMENTS
M.01	Construct square or rectangular brick columns		
M.02	Construct round or irregular brick columns		
M.03	Construct a block column or pier		
M.04	Construct stone columns		
M.05	Face and finish columns		
M.06	Face and finish a concrete beam		

OCCUPATION: **BRICKLAYER**

DUTY: **Construct Steps and Stairs**

CODE	TASK	TAUGHT	COMMENTS
N.01	Layout and construct concrete steps and stairs		
N.02	Layout and construct brick steps and stairs		
N.03	Layout and construct stone steps and stairs		

OCCUPATION: **BRICKLAYER**

DUTY: **Set Up a Brick-Block or Rock Job**

CODE	TASK	TAUGHT	COMMENTS
0.01	Stock materials		
0.02	Build and stock a scaffold		
0.03	Temper mud		
0.04	Prepare footing		
0.05	Perform final clean-up (wall and job site)		

DUTY/TASK LIST

BRICK AND STONE MASONRY SERIES

OCCUPATION 2: ROCKLAYER

DUTIES:

A. Estimate Materials for a Wall, Structure, Sidewalk, or Paving
B. Layout a Wall, Structure, Sidewalk, or Paving
C. Construct a Wall and Lay Paving
D. Construct Chimneys and Fireplaces
E. Construct Walls with Sills, Lintels, and Coping
G. Construct Walls of Rubble or Field Stone
H. Construct Walls of Pre-Cast and Pre-Fabricated Units
J. Clean Masonry, Point and Caulk Joints
M. Construct Piers, Columns, and Beams
N. Construct Steps and Stairs
O. Set Up a Brick-Block or Rock Job

OCCUPATION: ROCKLAYER

DUTY: Estimate Materials for a Wall, Structure, Sidewalk, or Paving

CODE	TASK	TAUGHT	COMMENTS
A.03	Estimate the materials for a stone job (amount of stone, amount of mortar, amount of dye or coloring, amount of scaffolding, number of man hours, total cost)		

OCCUPATION: ROCKLAYER

DUTY: Layout a Wall, Structure, Sidewalk, or Paving

CODE	TASK	TAUGHT	COMMENTS
B.01	Establish grade levels (using a builder's level)		
B.02	Mark-off the boundaries of a wall, structure, or a paved area (use a framing square for square corners and a transit for non-square corners)		
B.04	Layout a section of wall containing joint reinforcements and openings as per plan (brick and block)		
B.05	Layout the center for an arch using a template or brace (semi-circular, segmental, elliptical, and/or Gothic)		

OCCUPATION: ROCKLAYER

DUTY: Construct a Wall and Lay Paving

CODE	TASK	TAUGHT	COMMENTS
C.01	Measure, mark, and cut masonry units to size (use manual, dry cut, and wet cut methods)		
C.02	Mix mortar to specifications (manually and/or with a mechanical mixer)		
C.03	Install wall ties on a frame wall		
C.05	Set a bearing plate and/or J-bolts (anchor bolts)		

OCCUPATION: ROCKLAYER

DUTY: Construct Chimneys and Fireplaces

CODE	TASK	TAUGHT	COMMENTS
D.01	Cut flue liner tile		
D.02	Construct a firebox with a straight, curved, or irregular wall (with fire clay or mortar)		
D.03	Install lining and lay up a chimney		
D.04	Construct a fireplace face		
D.05	Install flashing around a chimney or fireplace		

OCCUPATION: ROCKLAYER

DUTY: Construct Walls with Sills, Lintels, and Coping

CODE	TASK	TAUGHT	COMMENTS
E.02	Lay stone coping on top of a brick or block wall		

OCCUPATION: ROCKLAYER

DUTY: Construct Walls of Rubble or Field Stone

CODE	TASK	TAUGHT	COMMENTS
G.01	Construct a stone corner (using an uncoursed cobweb pattern)		
G.02	Layout and construct a wall section to a specified height using field stone (rubble) veneer on an existing or frame wall		
G.03	Layout and construct a wall section with projections		
G.04	Layout and construct a wall section two-withes thick		
G.05	Construct a panel of wall bond, random-coursed sandstone		
G.06	Construct wall section of pre-cast stone		

OCCUPATION: ROCKLAYER

DUTY: Construct Walls of Pre-Cast and Pre-Fabricated Units

CODE	TASK	TAUGHT	COMMENTS
H.03	Construct a stone wall of stone panels with raked joints (stone, slate, marble, or granite panels)		

OCCUPATION: ROCKLAYER

DUTY: Clean Masonry, Point and Caulk Joints

CODE	TASK	TAUGHT	COMMENTS
J.01	Repair mortar joints		
J.03	Caulk a door frame and a control joint		

OCCUPATION: ROCKLAYER

DUTY: Construct Piers, Columns, and Beams

CODE	TASK	TAUGHT	COMMENTS
M.04	Construct stone columns		
M.05	Face and finish columns		
M.06	Face and finish a concrete beam		

OCCUPATION: ROCKLAYER

DUTY: Construct Steps and Stairs

CODE	TASK	TAUGHT	COMMENTS
N.03	Layout and construct stone steps and stairs		

OCCUPATION: **ROCKLAYER**

DUTY: **Set Up a Brick-Block or Rock Job**

CODE	TASK	TAUGHT	COMMENTS
O.01	Stock materials		
O.02	Build and stock a scaffold		
O.03	Temper mud		
O.04	Prepare footing		
O.05	Perform final clean-up (wall and job site)		